Date: Wed, 16 Jun 93 06:00:00 PDT

From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>

Errors-To: Info-Hams-Errors@UCSD.Edu

Reply-To: Info-Hams@UCSD.Edu

Precedence: Bulk

Subject: Info-Hams Digest V93 #734

To: Info-Hams

Info-Hams Digest Wed, 16 Jun 93 Volume 93 : Issue 734

Today's Topics:

6M multi-hop Es to the US Are we losing our technical abilities? Attn SFO area CQ Alaska, Florida, or Idaho Digital microwave project DR-600T/TH-78A mods? Signals for the Far Side ... Uniden M8100 VK2WI Weekly News, 13 June 1993 Wanted: High-Power Amp for 144MHz ZL policy on Morse Code

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu> Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu> Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available (by FTP only) from UCSD. Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 16 Jun 1993 07:20:37 GMT

From: mcsun!sunic!ugle.unit.no!trane.uninett.no!news.eunet.no!nuug!statoil!ddm3!

magne@uunet.uu.net

Subject: 6M multi-hop Es to the US

To: info-hams@ucsd.edu

Fred McKenzie (fred-mckenzie@ksc.nasa.gov) wrote:

: Can any of you experienced 6 Meter operators give me some advice? Is there

: a single frequency that would be good to monitor, to hear early signs of a

: band opening? Where do DX CW stations hang out? Many seem to be

: collecting "grid squares". Are they only interested in the first 4

: characters, or does anyone want all 6?

I don't know the U.S bandpland, but here is the Region 1 plan (Europe etc.) Since EU is DX for you, this may be what you're looking for. Lots of EU-guys monitor 110...

In contests, it is common (at least in EU) to include all 6 characters of the square in the test report. In "normal" qso's, it varies. I think most operators will accept the first 4. I normally exchange all 6, but reduces to 4 on marginal conditions.

```
50.000 - 50.100
  020 - 080
                       Beacon
                       CW Activity Centre
  090
                    Narrowband, All Modes
50.100 - 50.500
  100 - 130
                       Intercontinental
  110
                       DX only!
  185
                       Cross Band Activity Centre
  200
                       SSB Activity Centre
  300
                       Meteor Scatter CW Activity Centre
  350
                       Meteor Scatter SSB Activity Centre
50.500 - 52.000
                   All Modes
                       FSK / RTTY
  600
  620 -
           750
                       Packet
51.110
                       VK / ZL Calling Frequency
  410 -
           590
                       FM Channels - 20KHz step
  510
                       FM Calling Frequency
```

73 de Magne LA1BFA (JP53EK) magne@statoil.no

Date: Wed, 16 Jun 1993 03:27:14 GMT

From: netcomsv!netcom.com!netcomsv!bongo!julian@decwrl.dec.com

Subject: Are we losing our technical abilities?

To: info-hams@ucsd.edu

In article <1vli8k\$756@techbook.techbook.com> genew@techbook.techbook.com (Gene Wolford) writes:

>I am forwarding this email discussion to the newsgroup in case someone may >think it worthy of futher consideration.

>>From: davids@ims.com

>>

>>Apparently (a) the "J-slot" antennas he was talking about were not mobile,

>>but fixed, and (b) "J-slot" is (or was) the BRAND NAME of an antenna made ><by some company in Californicatia or someplace. AND, they were a type of >>Yagi or something with 12 or 13 elements, and possibly a special driven >>element. AND, the two guys he knew who were screwing around with them had >>TWO of them mounted on a mast, and had done computer modeling on the result, >>to the extent that they'd gotten the array to put out a 36" wide "beam" on >>2 meters, with which they could talk all the way up and down Southern >>Californicatia.

>>

>>this all happened 20 years ago.

>>

>>He says "they're losing the technology", i.e. the hams of today are >>SO STUPID, (UNEDUCATED) that all they can do is "go buy a box and >>hook it up, so they don't have to think".

This is trully wonderful. The "J-slot" must I assume be the J-Beam skeleton slot. Made in the U.K., Very popular over 20 years ago. With two getting a one meter wide beam? Really?

The skeleton slot was no more than a pair of stacked Yagis. It was fed with an arrangement called a "skeleton slot". It was usually a pair of 6 or 8 ele Yagis.

We haven't "lost technology". All you need to know about the J-Beam skeleton slot is available in old handbooks from both the RSGB and ARRL.

And what did these guys do 20 years ago? Well they "go buy a box and hook it up so they don't have to think". Yes, you purchased J-Beam Yagis, just like you purchase Cushcraft and KLM today. Nothing has changed. Nothing magical happened 20 years ago.

So what about the above is suspicious? 1. claiming the J-Beam was made in California. 2. Claiming 2 J-Beams with give a beamwidth of 36" (not stating at what point - two meters in front or two hundred kilometers). 3. Amateurs doing antenna computer modelling 20 years ago.

Looks like an urban legend in the making to me.

. _

Julian Macassey, N6ARE julian@bongo.tele.com Voice: (213) 653-4495 Paper Mail: 742 1/2 North Hayworth Avenue, Hollywood, California 90046-7142

Date: Wed, 16 Jun 1993 01:27:03 GMT

From: pacbell.com!iggy.GW.Vitalink.COM!wetware!spunky.RedBrick.COM!psinntp!

psinntp!iat.holonet.net!bwilkins@ames.arpa

Subject: Attn SFO area To: info-hams@ucsd.edu

mcduffie@unl.edu (Gary McDuffie Sr) writes:

: This may seem a strange place to post such a request, but I couldn't come up with a better one. I've been a ham long enough to know that there are hams in every job imaginable and this might find one who can help.

. 11

: I'm going to be in the Bay Area early next month and have heard that : if you know the right person, you can get up in the south tower of the : GGB. If anyone knows someone who can arrange such, I would be happy to : communicate with them via whatever means necessary.

:

: I have a tour of the Mt.Sutro tower arranged and would like to add : this to the things I've done in ${\rm my}$ city of birth.

:

The Upper platforms of Sutro Tower now require the wearing of an rf radiation suit..I hope it is not a warm day for your tour. The mega-watt channel 20 transmitter tipped the balence. Yes the EPA made them do it.

It has been several years since I have been up the south tower of the bridge, at that time the bridge 480 radios and a passive microwave system were operational on the top.

Out here we call this " site seeing " enjoy your trip.

- -

Bob Wilkins n6fri voice 440.250+ 100pl san francisco bay area bwilkins@holonet.net packet n6fri @ n6eeg.#nocal.ca.usa.na

Date: 16 Jun 93 11:54:16 GMT From: news-mail-gateway@ucsd.edu Subject: CQ Alaska, Florida, or Idaho

To: info-hams@ucsd.edu

Are there any netters out there in Florida, Alaska, or Idaho with 2x1, 1x2, or 2x2 "A" calls who would be willing to try a 75 meter phone sked in the extra-class portion of the band? That's all I need for the 75m WAS award, and the Geratol Net (which meets for that purpose) doesn't start up again until October. 'Course I know what the 20 over 9 background noise on 75m is like in the summer, but it wouldn't hurt to try anyway. And every once in awhile it gets quiet here in North Carolina.

steve - W3GRG
mosier@iris.uncg.edu

dit dit

Date: 16 Jun 93 04:03:13 GMT

From: ogicse!netnews.nwnet.net!spiff.seattleu.edu!quick!ole!ssc!

markz@network.UCSD.EDU

Subject: Digital microwave project

To: info-hams@ucsd.edu

Keith Ledig (ree88132@zach.fit.edu) wrote:

: I am about to embark on a project that envolves the use of microwaves

: to transfer digital data.

: 2. What frequencies can be used for this microwave link? HAM?

Are there allocated frequencies for such experimentation and

: do they require a license?

If you operate under the provisions of the regulations used for unlicensed operation (Part 15) there are some allocations that can run resonable power. Up to 1 watt ERP. On the frequencies 902-928, 2400-2483.5 and 5725-5850 MHz. These are the regulations used by the new Wireless LANs. (Part 15.247) Spread Spectrum operation is required.

: 3 and 5).

If you alternate between the two, all you have to worry about is not frying the receiver. (As opposed to receiving the signal at the same time as transmitting.)

: 7. Where can I find out more info on this stuff?

Code of Federal Regulations Title 47 (Telecommunications) Parts 0 to 19. (A book available from a US Government Bookstore, or in the government section of any large library.)

Code of Federal Regulations Title 47 (Telecommunications) Parts 80 to End. (For the Private Operational-fixed microwave Service (Part 94) and the Amateur Radio Service regulations, Part 97).

The ARRL UHF/Microwave Experimenters Handbook. American Radio Relay League, 1990

The ARRL Spread Spectrum Sourcebook. American Radio Relay League, 1991 Microwave Handbook, Volumes 1 and 2 Radio Society of Great Britian, 1989 and 1991

Mark Zenier markz@ssc.wa.com markz@ssc.com

Date: 16 Jun 93 03:11:25 GMT

From: ucsbcsl!bap!kevin@network.UCSD.EDU

Subject: DR-600T/TH-78A mods?

To: info-hams@ucsd.edu

Hello all! I'm seeking information and clarification:

- 1) Anyone have modifications for the Alinco DR-600T? The schematic appears to be a slightly modified DR-599, so mods for that radio are also quite welcome.
- 2) I tried the "remove diodes 4 and 5" mod on my Kenwood TH-78A, but did not get extended transmit (into a dummy load, of course). Extended receive is working. Has anyone else experienced this? Aware of a way out of this?

Thanks for any and all replies. I'd be happy to summarize and post (or email) the fruits of any replies, if requested.

Kevin

Kevin Schmidt University of California, Santa Barbara kevin@bap.ucsb.edu Office of Budget & Planning

I don't speak for them, they don't speak for me.

Date: 15 Jun 93 08:19:33 GMT From: news-mail-gateway@ucsd.edu Subject: Signals for the Far Side ...

To: info-hams@ucsd.edu

For general interest, the only 50MHz signal from the USA that struggled across to Wales (IO82JJ) was KC4YO (at least, while our station was attended :-)

Maybe next year

73 Iain G8SJP/G0RDI/C30DLA/N2TLY

Date: Mon, 14 Jun 93 20:31:32 PDT

From: news.cerf.net!crash!hale!system@network.UCSD.EDU

Subject: Uniden M8100 To: info-hams@ucsd.edu

I wanted to bounce this off you radio active types...

I visited an ex-employer and current friend just to see what's doin' today, and he's redoing his radio systems and making the move to 800MHz.

He came up with several uniden M8100a's, which he has some concerns about 800Mhz. The documentation says they put out 6 watts per his memory.

At anyrate, he was worried about the things he's heard about 800 and got a goldfish and put in a ziplock baggie w/ water and places it about 3" away from the antenna. He then dead key'd the system for ~3 minutes, after which the fish was dead.

This isn't urban myth, And the fish was in it's own water (no clorine and oxygenated), this was done.

I thought I read somewhere RF around this region really penetrates about 3cm or so into living tissue (actually heats it), so my stab at it was the fish was less than 3cm thick and basically couldn't deal with heat buildup, though it was in water.

SPCA need not reply. I didn't do it!

System@hale.cts.com 619/660-6734 V.32bis

I believed what I was told, I thought it was a Hale Telecommunications Inc. good life, I thought I was happy. Then I found something that changed it all. (Anonymous, 2112)

Date: 16 Jun 93 01:37:28 GMT

From: munnari.oz.au!metro!mippet.ci.com.au!eram!dave@uunet.uu.net

Subject: VK2WI Weekly News, 13 June 1993

To: info-hams@ucsd.edu

[The following suddenly re-appeared on packet radio, from VK2XY, after an absence of several weeks.]

DICK SMITH'S TRANS-CONTINENTAL BALLOON ATTEMPT:LIFT OFF IMMINENT

As this week's divisional news was prepared, Dick Smith and co-pilot John Wallington were making ready for an expected launch from Carnarvon this Sunday evening.

Stations seeking contact with the special event station supporting and publicising the balloon crossing - VI2AUS should stand by on the bands. This could be it.

VI2AUS will be operating from the Sydney Headquarters of Australian Geographic Magazine in Terrey Hills.

Look out for the callsign on 20 metres in particular, but operation is also scheduled for 80 metres, 40 metres, 30 metres and 15 metres.

The VI2AUS operation has been organised by the N.S.W. Division advertising and publicity section; the team of volunteer operators is co-ordinated by the division's special projects officer, Steve Pall, VK2PS.

Dick Smith Electronics has provided two Yaesu transceivers and other equipment for the Terrey Hills station.

For an update on Dick Smith's attempt, you can get recorded information from

0055 29 060

calls cost 25 cents for 42 seconds.

The message is generally updated each evening.

[NOTE: It is my understanding that the callsign actually used to communicate with Dick will be VK2AWI; the last thing we need is hordes of prefix-hunters descending upon us if things go wrong. DH]

VI2AUS AND WICEN

While the NSW Division fully appreciates the role WICEN plays in the community and within the amateur radio fraternity, the VI2AUS special event operation in support of the Australian Geographic/Dick Smith

Trans-continental Balloon Attempt has been mounted at the personal invitation of Dick Smith to the Division, with the express view of publicising the hobby to the public at large and secondarily providing a publicity vehicle for the NSW Division of the WIA.

As such the VI2AUS operation is not an "emergency exercise", either officially or unofficially. It is not intended to be, even though there is to be certain scheduled communications between the balloon and the Terrey Hills station.

The involvement of volunteers, who may also be members of WICEN, to operate the special event station is welcomed. However, in order that there be no confusion in the minds of the public, or anyone else, the Divisional Council advises that such volunteers are NOT to wear WICEN uniforms, even though it has been broadcast that they are requested to wear them, with leave from the State Co-ordinator for WICEN.

To make matters perfectly clear, NO official or unofficial approach has been made to the Divisional Council by anyone from WICEN and the broadcasting of the request was not sanctioned by Council.

Council will no longer tolerate unwarranted interference with the conduct of the Division's broadcasts, or any official Divisional activities, by persons who have no official standing within the Institute.

Bob Lloyd-Jones VK2YEL Divisional Secretary

[This WICEN message was not authorised by anyone from WICEN (NSW) Inc; furthermore at no time had WIA (NSW Division) indicated their intention to not cooperate with WICEN, nor had they replied to correspondence. DH]

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WARNING OVER DUMPING OF LOW-STANDARD ELECTRICAL AND ELECTRONIC PRODUCTS

Australia is in danger of becoming a dumping ground for electrical and electronic equipment of European origin which will not meet stringent new standards requirements of the European Electrotechnical Commission - The E.E.C. - which come into force on the First of January 1996.

The Australian Electrical and Electronic Manufacturers' Association warned of this possibility in their June newsletter.

The E.E.C. set the date of 1 January 1996 for the new maximum emission requirements to apply to electromagnetic interference - E.M.I. - from electrical and electronic products manufactured or sold in Europe after

that date.

Here, the local standard authority - Standards Australia - had made no decision as of June on the question of E.M.I. requirements for such products and the Federal Government's Department of Industry Technology and Regional Development "...has yet to formulate a position," according to the newsletter report.

"There is a risk that if the matter is allowed to drift, an unreasonable timetable for compliance with requirements similar to that imposed by the E.E.C. might be introduced if Australia adopts the same introduction date," says the newsletter.

"Alternatively, if Australia is out of step with the E.E.C. process, the Australian market could become the dumping ground for products that no longer comply with the European requirements." said the report.

The Australian Electrical and Electronic Manufacturers' Association believes that Australia should adopt the same date for E.M.I. compliance for electrical and electronic products manufactured or sold here - that is, 1st January 1996. They are to take up the matter with the relevant Government departments.

AUSTRALIA TOPS 35TH J.O.T.A. PARTICIPATION

With 18.8% of scouts in the country taking part in the 35th Jamboree of the Air last October, Australia scored the highest participation rate among the 23 countries who submitted reports to the world organization of the scout movement.

The Netherlands were close behind Australia, with 14.2% of their scouts participating. However, 17.9% of the guides in the Netherlands took part in last year's J.O.T.A., while 9.9% of Australia's guides participated.

A total of over 400,000 scouts and guides from around the world took part.

- From the International Jota Report 1992, from Peter VK6HU

WIA TO PARTICIPATE IN RADIOCOMMUNICATIONS STANDARDS PREPARATION

Four committees to prepare standards on rediocommunications equipment are being established by the national standards body, Standards Australia, under recent arrangements with the Department of Transport & Communications.

As a member of Standards Australia, the W.I.A. is seeking to participate in the committee processes.

A committee to be called R.C.1. will look at general radiocommunications equipment standards.

Committee R.C.2 will look at standards in the field of satellite and telecommunications networks; R.C.3. will cover low power radiocommunications equipment, and R.C.4. will cover maritime and safety of life equipment.

The committees will be making recommendations on the legislative application of the standards they prepare.

THE LAST LAUGH

It seems that a humorous item on the Broadcast of 11th April has been taken seriously by some amateurs and clubs around the country.

The item concerned discussed how amateurs were able to "GET BACK" the 11 Metre band - 27 MHz.

Despite the fact that the advice was - basically - go and buy a CB Licence, the humorous furphy has been taken as fact and even printed as a "known truth" in a VK3 club newsletter.

No - the much-touted "New Regulations" will not hand back 27 MHz to the amateur radio service.

But, then again, stranger things have happened in the recent past.....

- The N.S.W. Division brings you this news as a public nonsense!

CONTEST NEWS

VK NOVICE CONTEST - NEXT WEEKEND

O.K. all you novices and combined-call licensees - time to polish up the vocal chords and the morse key contacts - for next weekend's W.I.A. VK Novice Contest.

The fun begins at 0800 U.T.C. Saturday, 19th June and continues furiously until 0800 U.T.C. Sunday, the 20th.

Rules for the contest can be found in the May issue of Amateur Radio Magazine.

- From information supplied by Rob Milliken VK2SRM, Novice Contest Manager

WICEN NEWS

[This is all there was; it is not clear whether this is one of VK2XY's little jokes. DH]

CLUB NEWS

Firstly, we have a call to all club education or examination officers, and individuals who conduct license exams.

To assist candidates wishing to sit for examinations, the Division wishes to compile a register of examination dates.

If you could please contact the Divisional office by letter of fax, giving details of scheduled exam dates and times, and deadlines for applications, plus your contact names, addresses and phone numbers.

write to: P.O. Box 1066, Parramatta NSW 2124

or fax: (02) 633 1525

and while we're on the subject of education and examinations, we have a reminder that the St. George Amateur Radio Society is hosting a seminar on the subject at the

St. George Masonic Club 86 Roberts Road, Mortdale

on July the 4th.

It will open at 1400 hours and conclude no later than 1700 hours.

The purpose is to meet others who are interested in this part of our hobby and discuss how we each approach the task.

We may be able to assist one another in either exams or education.

If you are part of a team, or teach at home, you are most welcome.

Contact: Peter Corkeron, VK2AGB, on:

Home Phone Number (02) 521 6482

Work Phone Number (02) 529 6778, Mon-Wed-Fri

or Mobile 018 412 629

HORNSBY AND DISTRICT AMATEUR RADIO CLUB

The club meets on the 4th Tuesday of each month, at the Mt Colah Community Hall, Mt Colah, commencing at 8 pm.

The business side of meetings are kept short to get on with what everyone is there for - amateur radio.

A new program of events is currently being planned, so if you have a topic you would like to see presented as a lecture, please let anyone on the committee know.

New members welcome. Contact the club via

P.O. Box 362, Hornsby 2077.

- From Colin, VK2JCC

PARRAMATTA AMATEUR RADIO CLUB

The club's last meeting on the 4th of June was a huge success, with many new enthusiasts discovering the links between the worlds of electronics, computers and amateur radio.

Members and visitors alike shared with each other the practical methods used for electronic construction, ranging from professional methods to the simplest and cheapest suitable for home use.

Next meeting, on Friday the 18th, will be a kit building night. Bring your project - working or not - see what help you can get. There will be experienced people available to either fix your project or offer some assistance to solve your problems.

Bring some hand tools and test gear, if you can. An interesting night is assured.

That's Friday, 18th June, 7.00 pm at Amateur Radio House, 109 Wigram st, Parramatta. Coffee provided.

- from Garry Carter, Program Co-ordinator, Parramatta Amateur Radio Club

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COMING EVENTS

Saturday, June 19th:

VK novice contest commences 0800 U.T.C., concluding 0800 U.T.C. on Sunday, 20th.

Sunday, June 20th:

Wicen supports the Lake Macquarie Half Marathon. Alan VK2KVF is the contact.

Sunday, June 27th:

Wicen exercise - The Eloura Fun Run; contact Kevin VK2CKD; and the St Albans Horse Enduro - Contact unknown.

The next Divisional Council meeting is scheduled for Friday, June 18th. It well be held in-camera. Councillors only. It gets awfully stuffy in there with any more people in that camera!

Sunday, July 25th:

Divisional Trash & Treasure Sale.

Saturday, August 7th:

Tamworth Amateur Radio Club examinations; note that applications close on July 15.

The August quarterly divisional examinations will be held on Sunday, the 29th of August. Applications close on Thursday, 12th August.

Finally, Steve VK2QZ advises that the July-September broadcast roster will be drawn up shortly and asks that all broadcast team members notify him of any dates you're unavailable.

- -

Dave Horsfall (VK2KFU) VK2KFU @ VK2RWI.NSW.AUS.OC PGP 2.2 dave@esi.COM.AU ...munnari!esi.COM.AU!dave available

Date: 15 Jun 93 08:09:30 GMT From: news-mail-gateway@ucsd.edu

Subject: Wanted: High-Power Amp for 144MHz

To: info-hams@ucsd.edu

Don't overlook the earlier Henry amplifiers - the 6N2 and 2002, which were equipped with 2x8874 triodes.

My experience of those (I have a 2002 ...):
Feeling that my amp was a little 'long in the tooth' I acquired a newer 2002A, which was equipped with a single 3CX800 tube. After a three month evaluation period, I gave the newer amp to my dog for a garden toy :-)

My perspective is that the earlier, twin tube amplifier is far superior to the current model (easier to tune, more stable, more gain, more output, etc). Of course, this is only _MY_ view - I'm probably wrong, as usual.

Anyone with an unwanted 6N2 or 2002 would be well advised to contact me!

73 - Iain G8SJP/G0RDI/C30DLA/N2TLY ip@g8sjp.demon.co.uk

Date: 16 Jun 93 01:42:44 GMT

From: munnari.oz.au!metro!mippet.ci.com.au!eram!dave@uunet.uu.net

Subject: ZL policy on Morse Code

To: info-hams@ucsd.edu

This little snippet appeared on packet radio, and is presented here for your information. Followups are directed to *.policy.

From: ZL2CA @ ZL2WA

VIEWS FROM THE NEW ZEALAND GOVERNMENT ON MANDATORY MORSE CODE TESTING IN THE AMATEUR SERVICE

The Honourable Maurice Williamson, Minister of Communications for the Government of New Zealand released statements regarding International Radio Regulation 2735. RR2735 is the regulation that requires amateurs to qualify with Morse code to obtain a licence to operate on frequencies below 30 MHz.

The following excerpts of significance are quoted from the

Minister's reply:

- * "I believe that the continued presence of RR2735 in the International Radio Regulations, with its associated treaty status, is now anachronistic."
- * "The next opportunity to consider this matter at the international level may be a World Radiocommunication Conference in late 1995"

It is good to see an official statement that mandatory Morse code testing of amateurs is out-of-time. The statements show scope for realistic changes to occur, and in a realistic timescale.

Bob Vernall ZL2CA

- -

Dave Horsfall (VK2KFU) VK2KFU @ VK2RWI.NSW.AUS.OC PGP 2.2 dave@esi.COM.AU ...munnari!esi.COM.AU!dave available

Date: 16 Jun 93 03:09:37 GMT

From: munnari.oz.au!metro!mippet.ci.com.au!eram!dave@uunet.uu.net

To: info-hams@ucsd.edu

References <1v0s7t\$1pb@charm.magnus.acs.ohio-state.edu>, <1993Jun09.193854.14470@microsoft.com>, <739847454snx@llondel.demon.co.uk> Subject : Re: ham radios in movies

In article <739847454snx@llondel.demon.co.uk>,
 dave@llondel.demon.co.uk writes:

 \mid > I've used radios (2m and 70cm) deep down in caves, with little problem.

| >
| Presumably the cave acts like a large waveguide? Does 2M work if you have to
| wriggle through a small opening (i.e. less than 1/2 wavelength in any
| dimension)?

I don't know; this is something I need to work on further. I recall wriggling through a fairly small slot, but I was in no position to estimate its dimensions; I was too busy keeping the HT out of the *&!@#\$ grit :-)

When I get reproducible results I'll write it up for "Speleonics".

- -

Dave Horsfall (VK2KFU) VK2KFU @ VK2RWI.NSW.AUS.OC PGP 2.2 dave@esi.COM.AU ...munnari!esi.COM.AU!dave available

End of Info-Hams Digest V93 #734 ************